DOCUMENT RESUME

ED 220 764 CG 016 170

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TITLE Retirement Satisfaction among Coal Miners: A Correlational Study.
PUB DATE Mar 82
NOTE 21p.; Paper presented at the Annual Meeting of the Southeastern Psychological Association (28th, New Orleans, LA, March 24-27, 1982).

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS Adjustment (to Environment); Adults; Aging (Individuals); Gerontology; Income; *Life Satisfaction; *Locus of Control; *Long Range Planning; Physical Health; *Predictor Variables; *Quality of Life; *Retirement; Retirement Benefits

ABSTRACT

Because of increases in life expectancy and early retirement, the quality of life during retirement is of concern to many people. Previous research has found that health and adequate income have consistently been related to life satisfaction during retirement. Several satisfaction measures were administered to a group of 55 retired coal miners. The variables of health and income were controlled to assess the effects of other variables. When health and income were held constant, planning was the best predictor of satisfaction. For those living in their own homes, internality also predicted satisfaction in retirement. Results indicated that preretirement counseling and/or individual planning may facilitate higher levels of life satisfaction after retirement. (Author/JAC)

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RETIREMENT SATISFACTION AMONG COAL MINERS:

A CORRELATIONAL STUDY

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Running head: Satisfaction and Retirement

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Retirement Satisfaction Among Coal Miners: A Correlational Study

Because of increases in life expectancy and the possibility of early retirement, retired individuals comprise a larger number and proportion of our population. Only 21% of men over age 65 are employed as compared to 45% in 1960 (Benedict, 1978). Thus, a longer retirement period can be anticipated, and the quality of life during the retirement period will be of major concern to the retirees and society. Some of the specific variables which may be related to life satisfaction in retirement are sex, income level, occupation, personality type, and health.

Variables Which May Influence Satisfaction in Retirement

Sex. Findings relating to sex differences with regard to importance of the worker role and life satisfaction have been mixed. Palmore (1965) concluded that the worker role was more important to men than to women while Atchley (1971) found that only female teachers defined themselves in terms of their past work. In a later study (Atchley, 1976), which controlled for marital status, education, and income, no sex differences were found in importance of work, or in adjustment to giving up one's job. Based on the Retirement Descriptive Index, Smith, Kendall, and Hulin (1969) found that activities are more important to men than are people, and that people are more important to women than are activities. Thus, it seems likely that there is no difference in retirement satisfaction between men and women who are similar in other respects such as, educational level, marital status etc.

Income Level and Occupation. Income level and occupation may be related to each other and will be discussed together. Huyck (1974) says that financial security is a most crucial issue for the aging individual and that there is typically a decreased standard of living. Medley's (1976) finding that satisfaction with standard of living was more important to life satisfaction than was actual financial condition implies that even though standard of living may decrease, for some, the decrease is not significant (i.e. does not lend to dissatisfaction). Palmore and Luikart (1972) suggest that there is a sufficient level of income above which additions to income add little to contentment. In a review article, Larson (1978) notes that income is the variable which has been most consistently related to life satisfaction. In a cross-sectional sample of retired Americans in 1968 and 1976, Barfield and Morgan (1978) found that in 1968 satisfaction seemed to be predicted by retiring prior to age 65 as planned, having experienced few health problems, having a retirement standard of living which compared favorably to preretirement standard of living, having a high retirement income, and having a high school education. In 1976, these researchers found only two predictors of satisfaction: health and income. In a sample of retired college professors, 88% reported no change in standard of living and a higher "spendable" income after retirement (Kell & Patton, 1978). The higher income was due to a lack of deductions for income tax and social security, and the elimination of work related expenditures such as clothing, transportation and meals.

Shanas (1972) found that work has different meanings for different occupational groups. For steel workers, work means money; for craftsmen and salespeople, it means activity; for coal miners, it means routine

and association with fellow workers; and for physicians, it means service. Money was important to over half the sample. Retired men irrespective of occupational group miss money but blue collar workers and retirees are more likely to report that money is the thing they miss or would miss most. The non-economic aspects of retirement varied among occupational groups. White collar employees and retirees report that they miss or would miss the people at work most, agricultural workers report they miss or would miss the work itself most, and blue collar workers report that they miss or would miss both the people at work and the work itself. Nine percent of the retirees reported that they did not miss anything about their jobs; however, these were individuals with high retirement incomes. An association between occupational status and life satisfaction has been found in several studies (Edwards & Klemmack, 1973; Spreitzer & Snyder, 1974; Cutler, 1973). Goldstein (1967) reported that the tendency to remain in the labor force varies directly with position in the occupational hierarchy.

Personality Type. Havighurst (1968), in commenting on the inadequacy of the Activity and Disengagement Theories of aging says that of the three areas in which he has collected data -- activity, satisfaction, and personality -- personality seems to be the pivotal dimension in describing patterns of aging and in predicting relationships between level of activity and life satisfaction. One way of describing personality type is by using an internal/external dimension.

The concept of internal versus external control of reinforcement was developed out of social learning theory. In general, a person who perceives an event as contingent upon his own behavior is said to have a belief in internal control while a person who perceives an event as

a result of luck or chance is said to have a belief in external control (Rotter, 1966).

Rotter (1975) warns that one should guard against the assumption that expectancy regarding control of reinforcement is a behavioral trait. The prediction of behavior cannot be based solely on the internal/external dimension. The value of the reinforcement that is the expected outcome of the behavior being studied must also be considered. In the context of a valence model of satisfaction in retirement, it is possible that the correlates of satisfaction in retirement would be different for the internal and external individuals due to the differential reinforcement value of the correlates.

The concept of locus of control deals with situational parameters and individual differences; however, the situational parameters have largely been ignored (Wolk, 1976). Rotter (1966) suggests that it may be better for the aged who are trying to cope with failing abilities to have a greater feeling that they can control what happens to them, but notes that investigators should guard against any assumption that internals are always "good guys" and externals are always "bad guys." Such an assumption could contaminate results since the relationship between locus of control and adjustment depends upon the definition of adjustment which is a value concept. Palmore and Luikart (1972) found internal locus of control to be the second best predictor of satisfaction among people over age 60. Wolk (1975) in a sample of elderly people found that the degree of internal control related positively to adjustment. Feldon and Kahana (1974) in a study of institutionalized elderly found that external locus of control was related to higher adjustment ratings. This was a departure from earlier findings but is

consistent with more recent findings in which situational variables were considered.

In 1976, Wolk tried to correct what he felt was a deficiency in his 1975 study, a failure to evaluate systematically the effects for the situation on the locus of control-adjustment relationship. The subjects in Wolk's 1976 study either lived in a retirement village in which each individual met his own needs or in a retirement home in which most needs were met by the home. He found that the subjects in the retirement village manifested significantly greater internal locus of control and that expectancy for internal control correlated with developmental adjustment satisfaction, positive self concept, and maintenance of activity only in that situation. He concludes that neither internality nor externality of locus of control per se, directly leads to adaptation and adjustment. Rather, what appears crucial is the congruence between a generalized external or internal perception of control and its behavioral correlates and the actual and specific contingencies of an environment. From this, it seems likely that dissatisfaction with the retirement situation and life in general could result from an incongruent combination of locus of control and environment.

Recently, a study comparing a group of active elderly and a group of elderly nursing home residents found that the active group was more satisfied, more internal, and less anxious than the nursing home group (Queen and Freitag, 1978). It seems very likely that the health variable may be confounded with the other variables and have led to these findings which are not entirely consistent with Wolk's recent findings.

Health. Estimates of the correlation between health and well-being suggested by Larson (1978) range from .20 to .40. A person's conception of his health was shown to be a more important determinant of life satisfaction than a physician rating in a 1972 study (Palmore & Luikart, 1972). Poor health has repeatedly emerged as an important predictor of low life satisfaction (Cutler, 1973; Edwards & Klemmack, 1973; Spreitzer & Snyder, 1974).

In summary, there seem to be several factors which affect satisfaction in retirement. From Atchley's (1976) well controlled study, it seems unlikely that sex is an important variable. Health, however, seems very important. It may be that some of the inconsistencies in experimental results have been a result of confounding of health with other less powerful variables. Havighurst (1971) and Huyck (1974) both feel that personality type is very important and it seems that they may be correct especially if locus of control is considered in conjunction with situational variables. Type of job and income level are intertwined and it may be that those individuals with high preretirement incomes have high retirement incomes and are able to maintain a very similar standard of living. An adequate income seems to be of greater importance than magnitude of income.

Conclusions and Rationale

Good health and an adequate income seem to be prerequisites to high levels of life satisfaction after retirement. It is possible that the powerful effects due to these variables have masked or distorted effects due to other important variables. The present study controlled these two variables in order to better evaluate effects due to other variables such as personality type, marital status, age, and planning.

All subjects were receiving an adequate income at the time of the study. All were receiving a union pension and social security, and some were also receiving black lung benefits.

METHOD

Subjects

The subjects (Ss) were 55 of the 127 retired members of a United Mine Workers Local. All subjects were male. Of the 72 who did not participate, 14 indicated that they could not participate due to poor health, 30 refused to participate for undetermined reasons, 11 agreed to participate but failed to keep the interview appointment, three died, two interviews were not usable, and 12 were not located. All of the subjects were receiving an adequate income at the time of the study. In addition, all reported they were in reasonably good health and were healthy enough to come for an interview.

Procedure

Each subject was contacted by telephone if possible, or by mail, to solicit cooperation and set up an appointment for the individual interview.

The data were collected via a structured interview. Most interviews were conducted at the union hall; however, some home interviews were conducted for those who indicated that they had no transportation or were confined to their homes because of a sick spouse. A questionnaire designed to elicit demographic information and internal/external questionnaire was administered first followed by the Retirement Descriptive Index (RDI) (Smith et al., 1969) and the Life Satisfaction Index A (LSI) (Neugarten, Havighurst, & Tobin, 1961). The Faces Scale (Kunin,

1955) was administered last. The LSI and RDI were administered in counterbalanced order followed by the Faces Scale.

The interview lasted approximately 30 minutes. Instructions for the satisfaction measures were given orally to each subject and each was advised that he should ask that an item be repeated if he failed to hear or understand it. The Ss asked for clarification of some words and were given synonyms which they seemed to understand. An attempt was made to provide the synonyms uniformly as soon as it was apparent that the item presented a problem for the S.

The RDI is made up of four scales, Health, Activities and Work, Financial Situation, and People You Associate With. Separately, the scales indicate satisfaction in those four areas and combined, they yield a measure of overall satisfaction. Each scale consists of descriptive words and phrases and the Ss respond "yes," "no," or "I don't know" to indicate whether they feel that the word or phrase describes that area of their life. Some of the items are positive and others are negative.

The LSI-A consists of twenty statements with which the Ss either agree or disagree. The statements cover attitudes about activities, finances, planning, health, and outlook on life but are not grouped into categories. The result is a measure of life satisfaction. The Faces Scale consists of six faces and each S indicates which face best depicts how he feels about his life in general.

The internal/external locus of control variable was assessed by a short form of the Adult Nowicki-Strickland Internal-External Control Scale (ANS-IE) (Nowicki & Duke, 1974). The ANS-IE consists of 40 items which are answered either yes or no. The short form consists of eight

items. A Flesch Reading East Score (Tiffin & McCormick, 1965) of 189.7 or "very easy" was obtained for the eight items selected.

Results

The typical subject was a married (89%) homeowner (95%), and all had a minimum income of $6,000 per year. Most had an income of between $8,400 and $10,800 per year. The range was from $6,000.00 to $20,000.00 per year. Few (5%) finished high school and few (9%) had changed their dwelling since retirement. Sixty-nine percent of the sample were able to drive themselves in a car when they wanted to go somewhere. The age range was from age 60 to 85 years and the subjects had been retired from 1 to 30 years.

The Pearson product-moment correlation matrix for the Activities (RDIA), Finances (RDIF), Health (RDIH), and People (RDIP) scales of the RDI and the total RDI (RDITOT), the LSI, and the Faces Scale was obtained in order to determine whether the satisfaction measures were related to each other. The Faces Scale was negatively correlated with the total RDI measure, r (55) = -.64, $p < .001$; however, it was not related to any of the other measures. During the interview, it was noted that Ss seemed to have difficulty relating to the abstract task of expressing their overall feelings about retirement through one of the faces. For that reason, the Faces Scale was excluded from further analysis.

The People Scale of the RDI was correlated with the total RDI: r (55) = .23, $p < .05$, but not with any of the other RDI subscales. Examination of the distribution of scores revealed that the People Scale was negatively skewed. A possible explanation for this is that the majority of the Ss reside in a small rural community, and the contacts

with other people may be limited mostly to family and close friends. In view of this unusual pattern of scores, the minimal correlation with the RDI total, and the lack of correlation with the other satisfaction measures, the RDIP was not analyzed further. A new RDI total score was computed using the three remaining scales. This revised total RDI is the measure used in all subsequent analyses. A correlation matrix of these measures, LSI, RDIA, RDIF, RDIH, and RDITOT, was obtained and all were highly correlated. A summary of the matrix, as well as sample means and standard deviations, are furnished in Table 1.

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Insert Table 1 about here

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A comparison of the data in Table 1 with the normative data provided by Smith et al. (1969, p. 135-145) indicates that this sample is more satisfied than the normative sample with their activities, t (55) = 13.16, $p < .001$, financial situation, t (55) = 26.29, $p < .001$, and health, t (55) = 2.71, $p < .01$. This sample was slightly less satisfied than was the LSI normative group (Neugarten et al., 1961, p. 139), t (55) = -2.12, $p < .05$.

Point biserial correlation analyses using the satisfaction measures and the dichotomous variables (internal/external, planning, and race) were performed. As expected, race was not related to satisfaction. Results indicated that internals, t (45) = -2.12, $p < .05$, and those who planned, t (51) = -2.61, $p < .05$, were more satisfied with their activities than externals and those who did not plan, and those who

plan are more satisfied overall as measured by the total RDI, t (5) = 2.000, $p < .05$, than those who did not plan.

Stepwise multiple regression analyses were carried out using age, number of years retired, degree of internality, and income as predictors and the satisfaction measures as criteria. (The degree of internality was determined by scoring the number of internal responses on the internal/external questionnaire.) None of these variables accounted for a significant amount of the variance in satisfaction. A regression analysis of the categorical variables -- internal/external, planning, and race -- with the satisfaction measures yielded significant results for internal/external (IE) and planning on the RDIA and RDITOT. Internality and planning were both related to satisfaction with activities as measured by the RDIA and overall satisfaction as measured by the RDITOT.

In order to determine whether the IE and planning variables were statistically independent, a chi square analysis was performed. Results showed that there was not a systematic relationship between these two variables, $\chi^2(1) = 1.12$, $p < .29$.

DISCUSSION

The hypotheses that planning and locus of control would predict satisfaction in retirement were supported. When health and income level are controlled, the crucial variable affecting satisfaction seems to be planning. Forty percent of the retirees in the sample indicated that they had planned for their retirement, and both the point biserial analysis and the regression analysis indicated that planning was related

to satisfaction. A longitudinal or cross-sectional study should be conducted in order to test more conclusively the hypothesis that relatively healthy individuals with adequate income who plan for their retirement are more satisfied in retirement than those who do not plan.

The other variable which was significantly related to satisfaction was the internal/external variable. The finding of this study was that among individuals living in their own homes, internals are more satisfied than externals. This is consistent with previous findings (Wolk, 1976). For those living in someone else's home, it was predicted that externals would be more satisfied than internals; however, this prediction could not be evaluated since only a few members of the sample did not live in their own homes.

The results of this study support the notion of Havighurst (1968) that personality type is an important factor in life satisfaction. It may be that cognitive and situational variables interact with personality type to predict satisfaction. It is also possible that activity level and roles which are consistent with an individual's personality type would tend to add to life satisfaction.

When the effects due to income and health are controlled, planning seems to be the best potential predictor of satisfaction in retirement. Internality also seems capable of predicting satisfaction for individuals living in their own homes. Because of the implications for preretirement counseling programs, probably the most important finding in this study is that those who plan for their retirement subsequently are more satisfied with retirement.

Planning for income and health can be carried out to a degree although some aspects of income and health are admittedly uncontrollable.

If estimates of pension and Social Security benefit amounts indicate that retirement income will be inadequate, plans can be made early for supplementing retirement income. Health habits such as exercise and a good diet can be started early to help prevent diseases and deficiencies which may be associated with advancing age.

Other aspects of one's life are more amenable to planning. An individual needs to be aware of pertinent laws in order to decide whether he should have a will and how taxes will affect his retirement income. It is very likely that one's lifestyle will undergo some drastic changes after retirement and planning ahead could prevent many lonely boring hours. Of course, one should plan for a residence in keeping with his lifestyle.

In order to be ready for retirement, it seems that planning should begin early, at about age 45-50 years, with a schedule and specific goals. Ossofsky (1977) noted that the principal problems with existing preretirement counseling programs are 1) a failure to provide guidance on how to use options and benefits of specific plans and benefits, 2) a failure to take into account individual needs, 3) a failure to stimulate and initiate actual planning and 4) a failure to use modern training techniques. These seem to be very serious limitations but all seem fairly easy to overcome. If several counselors were available in a workshop type session, individual attention could be provided and specific information of interest to an individual could be furnished. The workshop could be used as a beginning of specific planning and suggesting which are consistent with the individual's personality type could be offered. Individuals who offer preretirement counseling

should, of course, keep up with and use the best possible training techniques.

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FOOTNOTES

This article is based in part on a master's thesis submitted by the first author to the University of Alabama at Birmingham under the direction of the second author. The author wishes to thank Ansel Spiegle, John Ost, Norman Eggleston for their assistance. The author would also like to thank William Sauser for his helpful comments.

Portions of this paper were presented at the meeting of the Southeastern Psychological Association in New Orleans, La. in March, 1982.

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TABLE 1

Means, Standard Deviations, and Correlations

Among Satisfaction Measures

	Mean	Standard Deviation	RDIA	RDIF	RDIH	RDIT
LSI	11.5	3.3	.53*	.41*	.42*	.53*
RDIA	40.1	5.5	--	.39*	.33**	.69*
RDIF	40.2	4.8	--	--	.35**	.73*
RDIH	15.8	4.9	--	--	--	.75*
RDIT	96.5	11.5	--	--	--	--

* $p < .001$

** $p < .006$